

### **Abstract**

The present invention relates to a stress/strain measuring sensor for the continuous monitoring of stress/strain conditions, especially in screwed bolts, along with a corresponding measuring process.

The object of the invention is to create an arrangement and a corresponding method that is uncomplicated and easy to implement, and enables a continuous monitoring of stress/strain conditions.

This is attained according to the invention in that a sensor (1) is provided that comprises a first inductor (3) and at least one additional element (2), which comprises at least one pressure-dependent first impedance (5) or a second impedance (5') and a second inductor (3'), wherein the second impedance (5') and/or the second inductor (3') are pressure-dependent, so that when the amount of pressure applied to the element (2) changes, the resonant frequency of an electromagnetic resonating circuit (3, 5; 3', 5') that is formed by impedance (5, 5') and inductor (3, 3') changes.